forward by basic scientists, it is encouraging to note the increased contributions from clinical researchers. This volume certainly makes an effort to connect the preclinical and clinical material in a way that makes it easier for the clinician to grasp the complex mechanisms and principles underlying drug actions.

Though the book contains 163 chapters written by a long list of contributors, the editors are to be complimented for assembling this vast amount of information by various contributors with different writing styles, maintaining general conformity with style, and allowing the information to flow easily. Obviously, this monumental work is not intended for the casual reader or the reader who needs a quick-fix on "how to," but certainly it is a valuable tool for basic and clinician scientists. It is necessary reading for graduate students in neuropsychopharmacology. The book covers an extensive list of important topics, all of them relevant. The book would have benefitted, however, from more attention to a number of topics that can be grouped under the rubric of the social psychology of medication taking. After all, the development of the best medication is of little impact if our patients do not take it or if we lack the knowledge to make them take it. In addition, because a good base of knowledge about the interface of neuropsychopharmacology and other approaches, such as psychosocial contributions, is evolving, this textbook could have touched more specifically on this area of interest.

In conclusion, this book is valuable in the field of neuropharmacology and provides up-to-date information on the breadth and depth of the topic. In the practice of psychiatry, pharmacotherapy is only 1 part of the total management. In that sense, some emphasis on conceptual integrative approaches toward the treatment of psychiatric patients would have added value in the clinical section. Obviously, a major contribution of such magnitude cannot conceivably cover all the nuances of the field. I highly recommend this book, which represents a major and important endeavor; its editors are to be complimented. Given the current pace of neuroscience research developments, the next volume will likely be needed in the next few years. This raises the issue of the phenomenal demands on energy and time to publish such books and whether it is more practical between decades to rely on selected updates of certain topics that made significant progress in a short time.

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Contemporary Issues in the Treatment of Schizophrenia. CL Shriqui, HA Nasrallah, editors. Washington (DC): American Psychiatric Press; 1995. 863 p. US$95.00.

It is heartwarming to see a first-rate text about schizophrenia that includes so many Canadian authors. Many of the breakthroughs in schizophrenia research in recent years have come from Canadian laboratories and clinics, but the average reader would not know it because most textbooks and widely read journals are published in the United States of America and the United Kingdom, and the impact analysis of cited papers is highest for American authors. This trend is understandable, but it presents the world with a lopsided view of where the action is in schizophrenia research. This book is coedited by a Canadian and an American editor who draw on the expertise of both nations and even include some (not many) European authors.

The first decision in attempting to write a book about schizophrenia is whether or not to adopt an atheoretical stance (as these editors have done) or whether to advance a particular point of view about the "true" nature of this mysterious malady. The first way is more democratic and allows input from many, sometimes conflicting, perspectives. It is also probably less subject to criticism. The second way is going out on a limb, and it severely limits the number of authors you invite to take part. Contributors need to be only those who can faithfully adhere to a unified theory. Though this approach is challenging for editors, it makes for easier and more interesting reading. I would hope that the talented, knowledgeable authors who have contributed to this book could next produce a smaller, integrated text which could offer a vista of how a general theory of brain function might embed a specific theory of schizophrenia impairment, which would lead to the crux of what needs to be researched and resolved.

Although this book does not accomplish that, it is, nevertheless, an extremely useful compilation of what is known. Section 1 covers biochemistry, postmortem abnormalities, and the new genetics. This is the traditional way to start, but it begs the question of which "schizophrenia" is being talked about in the various studies cited. This illness continues to defy understanding. Is it the tail end of a continuum of subtly increasing brain abnormality and, as such, not likely to yield homogeneous results structurally, biochemically, or genetically? Is it a group of genetically separable diseases, and if so, what strategy best disentangles these discrete illnesses so that clues to the etiology of each can be better pursued?

Since the heyday of the discovery of *Treponema pallidum* as a direct cause of a subgroup of the schizophrenias, there has been no similar breakthrough, although prion disease may eventually account for more human psychoses than only Jakob-Creutzfeldt disease: the expansion potential of trinucleotide repeats has already explained several neurologic diseases among whose manifestations psychotic thinking is prominent.

Section 2 addresses the issue of subgrouping but does it indirectly by discussing the incompatibilities among diagnostic systems, the epidemiology of "negative" and "positive" syndromes, the near ubiquity of depression in schizophrenia (what does this imply with respect to the dichotomy between schizophrenic and affective psychosis?),

the category of late-onset schizophrenia, the possibility that neurocognitive findings could lead to natural subdivisions (the chapter by Anne Hoff is excellent), and the possibility of subgrouping by brain structure, antipsychotic response, or sex-related phenomena such as premorbid strengths, onset age, and longitudinal illness course. I would have preferred that, rather than the authors discussing these topics simply as a means of reiterating the empirical evidence about difference and overlap, they instead consider each category as a possible filter through which a search for genetic or other causes could be conducted.

For instance, male–female differences in schizophrenia are striking and reproducible. We also know that male and female deoxyribonucleic acid (DNA) is dimorphic not only because women have 2 X chromosomes instead of an XY pair, but also because recombination rates and lengths of autosomes differ, and maternally and paternally inherited DNA conserve somewhat different characteristics. Integrating that knowledge into new genetic strategies might yield important results. Similarly, something is known about male–female brain differences. Can this knowledge help to explain male–female differences in schizophrenia? An example of such integration is Tim Crow's notion of lateralized language development as an evolutionary force that is specifically impaired in schizophrenia and accounts for many of the differences found between men and women with schizophrenia. Crow is probably the most theory-driven contemporary schizophrenia researcher: it is too bad that his concepts are not represented here.

Sections 3, 4, and 5 are about treatments and treatment side effects, and it is these sections that are best reflected in the book's title. The concept of novel antipsychotics is somewhat premature, I think, because the newer, so-called atypical drugs are very closely modeled on the old and are an improvement only insofar as they tend to produce fewer extrapyramidal side effects. They can, however, introduce other side effects no less difficult for patients to tolerate. I would have wanted to see a discussion on the ethics of drug trials, especially the use of placebos in situations where standard treatment does not always work, is sometimes unnecessary, and sometimes produces more adverse than beneficial effects. The difficulty, of course, is that we still cannot predict into which of these categories any given patient will fit. I would also have wanted to see a discussion of treatment sequencing—should we be thinking of stages of illness, with the best treatment of an initial stage followed by a subsequent optimal treatment focus on a second neurochemical system or a consequent social impairment? This is the standard approach to the treatment of other chronic illnesses (for example, rheumatoid arthritis, chemotherapy for cancer, and HIV treatment), but it has not been tried seriously in schizophrenia. There have been some attempts at logical sequencing of cognitive remediation techniques in schizophrenia rehabilitation, but these are not mentioned in this book.

These are minor quibbles, however. The book is thorough, easy to read, relatively comprehensive, and has some wonderful chapters by Canadian authors. I would recommend it to medical students, residents, and practitioners.

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Basic Neurochemistry: Molecular, Cellular and Medical Aspects. GJ Siegel, editor. New York: Raven Press; 1994. 1080 p. US$67.00.

This multiauthor volume (80 contributors) is a 5th edition of the book published under the auspices of the American Society for Neurochemistry. The 4th edition was published in 1989 under the same editorship. The book is divided into 6 parts: neuronal membranes, synaptic function, molecular neurobiology, cellular neurochemistry, medical neurochemistry, and behavioral neurochemistry. Each part contains several (from 3 to 14) chapters; there are 50 chapters in total. Each chapter is further divided into sections and has a separate bibliography.

Rapid advances in the field of neurosciences and a virtual explosion of information in areas of molecular biology and genetics during the last several years have presented the editors with the enormous challenge of conveying the material in a comprehensive yet readable manner within a single volume. It appears that they have successfully met this challenge. They have expanded the book by only about 100 pages in adding new chapters on the molecular basis of olfaction and taste, neurotransmitter and growth factor receptor families and 2nd-messenger signaling systems, amino acid and purinergic neurotransmission, neurotransmitter uptake system, and molecular targets of drugs of abuse. Many other chapters have been revised or rewritten to include new information on amine transmitters, eicosanoids and neuronal function, developmental neurobiology, gene expression, aging, cytoskeletal development and plasticity, and cognitive functions. An important new feature of this edition is the introduction of color plates for figures and tables and color subheading summarizing key concepts. The cartoons illustrating important concepts and mechanisms are instructive, and some of them use witty symbols (turtles) to indicate various pathways. They are easy to follow and to read. It is, though, a pity that 2 chapters in the behavioral neurochemistry section do not have any illustrations. All of these features make this volume virtually a new book, more readable and appealing than the last edition.

The 2 parts of the book with most extensive coverage of the subject are synaptic function and medical neurochemistry. I found the part on synaptic function well balanced and coordinated with excellent chapters on neuronal proteins and role of protein phosphorylation in regulation of neuronal function. The receptor classification is up to date (that is, to